This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for thermal insulation, comprising:

   - positioning a gel formed from an insulating liquid base, which is a phase change material, ~~and~~ at least one gelling agent comprising at least one polysiloxane resin, which may or may not be modified, and a compatibilizing agent between said insulating liquid base and said polysiloxane on a surface of an object to be insulated and
   - in situ cross-linking of said polysiloxane resin,
   - wherein the compatibilizing agent is a molecule with the same nature as the insulating liquid base that can be grafted onto the polysiloxanes during cross-linking; and wherein the gelling agent represents 0.5% to 50% and the insulating liquid base represents 50% to 99.5% of the total weight of the mixture.

2. (Previously Presented) A method according to claim 1, wherein said insulating liquid base is:

   - saturated or unsaturated, cyclic or non-cyclic aliphatic hydrocarbon bases;
   - aromatic hydrocarbon bases;
   - mixtures of aliphatic and aromatic fractions;
   - aliphatic or aromatic alcohols;
   - fatty acids, vegetable oils or animal oils; or
   - halogenated compounds.

3. (Canceled)

4. (Previously Presented) A method according to claim 1, wherein said insulating liquid base is a C_{12} to C_{60} paraffinic cut.

5. (Previously Presented) A method according to claim 4, wherein said insulating liquid base is long chain C_{30} to C_{40} n-paraffin waxes or long chain C_{30} to C_{40} isoparaffin waxes containing 1 or 2 branches.

6. (Previously Presented) A method according to claim 1, wherein said insulating liquid base is slightly branched alkyl chain alkylaromatics or alkylcycloalkanes, fatty alcohols or fatty acids.

7. (Withdrawn – Previously Presented) A method according to claim 1, wherein said insulating liquid base is a kerosene.

8. (Previously Presented) A method according to claim 1, wherein said polysiloxane resin is:

- monomers containing a motif with formula (I) terminated by two motifs with formula (II);
- oligomers with unitary motifs with formula (I) terminated by motifs with formula (II);
- polymers comprising unitary motifs with formula (I) terminated by motifs with formula (II);
- cyclic oligomers comprising unitary motifs with formula (I); or
- cyclic polymers comprising unitary motifs with formula (I);

formulae (I) and (II) being shown below:

(I)

(II)

in which formulae:

- symbols R^1 and R^2, which are identical or different, each represent:
    - a linear or branched alkyl radical containing less than 30 carbon atoms, optionally substituted with at least one halogen;
    - a cycloalkyl radical containing 5 to 8 carbon atoms in the cycle, optionally substituted;
    - an aryl radical containing 6 to 12 carbon atoms, which may be substituted; or
    - any other alkylaromatic chain;
- symbols Z, which are identical or different, each represent:
    - a group R^1 and/or R^2;
    - a hydrogen radical;
    - a hydroxyl radical;
    - a vinyl radical ($-CH=CH_2$); or
    - a saturated or unsaturated, aliphatic or cyclic carbonaceous chain, which may or may not contain unsaturated bonds, which may or may not contain heteroatoms, which may or may not contain reactive chemical groups;

with at least one of symbols Z representing a cross-linkable group.

9. (Previously Presented) A method according to claim 1, wherein said insulating liquid base represents 70% to 99.5% and said gelling agent represents 30% to 0.5% of the total weight of the mixture.

10. (Currently Amended) A method according to claim 1, wherein the ~~mixture further comprises a~~ compatiblizing agent between said insulating liquid base and said polysiloxane~~, the proportion of which is included in the proportion of gelling agent~~is a vinyl compound.

11. (Withdrawn – Previously Presented) A method according to claim 1, wherein the gelling agent comprises at least one polyorganosiloxane terminated by hydroxyl functions and at least one silane containing alkoxy functions or carboxylate groups and cross-linking is carried out in the presence of an acid catalyst, a basic catalyst or a catalyst based on tin or titanium in the presence of traces of water acting as a co-catalyst.

12. (Previously Presented) A method according to claim 1, wherein the gelling agent comprises two functionalized polysiloxanes:

- a resin A containing vinylsilane functions ($Si\text{-}CH{=}CH_2$) which may be grafted;
- and a resin B containing hydrosilane functions (Si-H);

and in that cross-linking is carried out by hydrosilylation.

13. (Previously Presented) A method according to claim 12, wherein the proportions of resins A and B are such that the mole ratio between the hydrosilane groups from resin B and the vinylsilane groups from resin A is 0.8 to 1.4.

14. (Previously Presented) A method according to claim 12, wherein the mixture comprises a hydrosilylation catalyst.

15. (Canceled)

16. (Previously Presented) A method according to claim 15, wherein said insulating liquid base represents 70% to 98% and said gelling agent represents 2% to 30% of the total mass of the mixture.

17. (Currently Amended) A method according to ~~claims~~claim 12, wherein the ~~mixture further comprises a~~ compatibilizing agent between said insulating liquid base and said polysiloxane~~, the proportion of which is included in the proportion of gelling agent~~is octadec-1-ene or allylbenzene.

18. (Previously Presented) A method according to claim 12, wherein said insulating liquid base is a C_{12} to C_{60} paraffinic cut, the proportion of gelling agent, which includes that of the compatibilizing agent, is 7% to 30% by weight, in which the compatibilizing agent represents a proportion of 10% to 40% by weight.

19. (Previously Presented) A method according to claim 18, wherein said insulating liquid base is a C_{14} to C_{20} paraffinic cut and the compatibilizing agent is octadec-1-ene.

20. (Withdrawn) A method according to claim 12, wherein said insulating liquid base is a kerosene and in that the gelling agent represents 5% to 30% by weight of the mixture.

21. (Previously Presented) A method according to claim 1, wherein the mixture has a time before gelling regulated by the temperature, the nature and the proportion of resin in said mixture and by the nature and concentration of any catalyst in said mixture.

22. (Previously Presented) A method according to claim 1, wherein the mixture further comprises at least one additive selected from antioxidant additives, antibacterial agents, corrosion inhibitors, anti-foaming agents and colorants, which are soluble in the

insulating liquid base.

23. (Previously Presented) A method according to claim 1, wherein the mixture further comprises at least one filler which is glass microbeads, fly ash, macrobeads or hollow fibres.

24. (Previously Presented) A method for insulating a flowline or a pipeline or a singularity on a flowline or pipeline, comprising

- positioning a gel formed from an insulating liquid base, which is a phase change material, and at least one gelling agent comprising at least one polysiloxane resin, which may or may not be modified, on a surface of the flowline or pipeline to be insulated and
- in situ cross-linking of said polysiloxane resin.

25. (Previously Presented) A method according to claim 24, comprising insulating an ultradeep pipeline for temperatures of 2°C to 200°C.

26. (Previously Presented) A method according to claim 24, wherein the mixture is applied as a coating to the flowline to be thermally insulated.

27. (Previously Presented) A method according to claim 24, wherein the mixture is interposed between the flowline and a protective external jacket.

28. (Previously Presented) A method according to claim 24, wherein said singularity is a bend, a tee, a valve or an automatic connector.

29. (Previously Presented) A method according to claim 27, wherein the singularity is on a flowline already in place on a seabed; a vacuum is created in said jacket to purge as much water as possible that it may contain; the mixture is injected into the jacket to inflate it and to create the desired insulation around said singularity.

30. (Withdrawn) A flowline or pipeline thermally insulated by a method according to claim 23.

31. (Withdrawn) A cross-linkable formulation for use in a method according to claim 1, comprising a mixture of an insulating liquid base, which is a phase change material, and at least one gelling agent comprising at least one polysiloxane, which may or may not be modified.

32. (Withdrawn) An insulating gel formulation according to claim 31, wherein the mixture further comprises a compatibilizing agent between said insulating liquid base and said polysiloxane.

33. (Withdrawn) An insulating gel formulation according to claim 31, wherein the gelling agent comprises two functionalized polysiloxane resins:

- a resin A containing vinylsilane functions ($Si\text{-}CH{=}CH_2$) which may be grafted;
- and a resin B containing hydrosilane functions (Si-H).

34. (Withdrawn) A process for producing an insulating gel from a formulation according to claim 31, comprising subjecting said formulation to cross-linking conditions.

35. (Withdrawn) A process according to claim 34, wherein a compatibilizing agent acting between said insulating liquid base and said polysiloxane is employed.

36. (Withdrawn) A process according to claim 34, wherein the gelling agent comprises two functionalized polysiloxanes:

- a resin A containing vinylsilane functions ($Si\text{-}CH{=}CH_2$) which may be grafted;
- and a resin B containing hydrosilane functions (Si-H);

and in that cross-linking is carried out by hydrosilylation.

37. (Withdrawn) An insulating gel, wherein it is formed from an insulating liquid base and at least one cross-linked polysiloxane resin.

38. (Canceled)

39. (Withdrawn) A flowline or pipeline thermally insulated using a gel according to claim 31.

40. (Withdrawn) A flowline or pipeline according to claim 39, wherein said gel is applied to the flowline to be thermally insulated as a coating.

41. (Withdrawn) A flowline or pipeline according to claim 39, wherein said gel is interposed between the flowline and a protective external jacket.

42. (Previously Presented) A method for thermal insulation, comprising:

- positioning a gel formed from an insulating liquid base, which is a phase change material, and at least one gelling agent comprising at least one polysiloxane resin, which may or may not be modified, on a surface of an object to be insulated and
- in situ cross-linking of said polysiloxane resin,

wherein said insulating liquid base is:

- saturated or unsaturated, cyclic or non-cyclic aliphatic hydrocarbon bases;
- aromatic hydrocarbon bases;
- mixtures of aliphatic and aromatic fractions.

43. (Previously Presented) A method for insulating a flowline or a pipeline or a singularity thereon, comprising:

- positioning a gel formed from an insulating liquid base, which is a phase change

material, and at least one gelling agent comprising at least one polysiloxane resin, which may or may not be modified, on a surface of an object to be insulated and

- in situ cross-linking of said polysiloxane resin wherein said insulating liquid base is:
- saturated or unsaturated, cyclic or non-cyclic aliphatic hydrocarbon bases;
- aromatic hydrocarbon bases;
- mixtures of aliphatic and aromatic fractions.